

4TH YEAR PROJECT HAZARD ASSESSMENT FORM

|  |  |
| --- | --- |
| **Project Code**: F-fi224-2\* | **Project Location**: Baker Building ING-14 |
| **Student Name**: Dhruv Trehan | **Student Email**: [dt518@cam.ac.uk](mailto:dt518@cam.ac.uk) |
| **Supervisor Name**: Fumiya Iida | **Supervisor Email**: fi224@cam.ac.uk |
| **Brief Description of Project**:  Testing different configurations of electrode placement to see which gives ideal trade-off in ease of manufacture to accuracy, testing with material detection | |
| **Hazard identification** (*the following examples are not an exhaustive list*):  Are there any hazards which are likely to be encountered during the project? **Y**ES **NO (Tick box) If YES then please provide further details under the headings below.** | |
| **IN DEPTH REVIEW OF THESE IN OHMC RISK ASSESSMENT THROUGH POWERAPPS**  **Electrical**: (e.g. electric shock, equipment operating at voltages >1000v, working on exposed circuits with voltages >50v etc. **NOTE** If you are working with an item either **self-built, or modified**, in excess of 25 Watts, 25 Volts or 1 Amp a risk assessment must be completed to outline the control measures in place to address the hazards. This applies to both AC and DC. ) Working with a small voltage/current circuit for EIT.  Electric shocks or burns from using faulty electrical equipment  1. All portable electrical equipment must be tested for electrical safety at the specified intervals and labelled with the date of the test. 2. Electrical cables and plugs should be visually inspected regularly by the user for damage. Any defective equipment should be reported immediately to the lab admin or H&S Manager, then suitably labelled, and taken out of use until the repair has been affected. 3. Electrical equipment must always be operated in accordance with manufacturers' instructions. | |
| **Hazardous Substances**: (e.g. harmful, toxic, flammable, sensitiser, carcinogenic, explosive, corrosive etc)  Some moulding may be done (silicone)  Harmful to human health by inhalation and skin contact. Risk of fire/explosion  1.If any hazardous substances are used a COSHH risk assessment must be completed, and a safe system of work issued to the users. | |
| **Gases: (**e.g. asphyxiant, flammable, toxic, explosive, oxidising etc)  Soldering will take place, make sure well ventilated have fume extractor on | |
| **Laser**: (e.g. class of laser etc)  N/A | |
| **Radiation**: (e.g. ionising, non-ionising, electromagnetic fields, x-rays, ultraviolet (UV) etc)  N/A | |
| **Robotic:** (e.g. errors - human/control, mechanical failures, power systems etc)  Robot Arm with parallel grippers will be running in automation, OHMC safety assessment covers this  1. Only authorised people may work with robots. 2. Robot users must read the Safe Code of Working Practice for each robot type where applicable. 3. New project members to sign current related project risk assessment documents if applicable. 4. Where appropriate, the OHMC should be sufficiently guarded and signed to prevent unauthorised entry. 5. When undertaking cleaning/maintenance operations, machine is to be switched off, e-stop engaged and electrically isolated  **Mechanical:** (e.g. power tools, workshop machinery, powered lifting, etc)  Don’t expect to be using power tools  **Biological:** (e.g. biological hazards, genetically modified organisms (GMO) etc)  **Physical:** noise**,** vibration, high pressures, falling objects collapsing structures, sharp objects, high or low temperatures etc)  3D printing  1.A risk assessment or ssow (safe system of work) must be completed for lifting heavy and bulky loads that present a risk of injury. 2. A trolley should be used to transport boxes of paper or other heavy items. 3.Training in lifting techniques should be provided for anyone who undertakes the lifting of heavy loads. 4. Use team lifting with at least two people, when appropriate, to handle heavy objects  1.The storage of empty cardboard boxes should be kept to an absolute minimum. 2.Equipment should be switched off when not in use for long periods. 3.All portable electrical equipment must be tested for electrical safety at appropriate intervals. 4. The installed fire alarm system must be maintained and tested regularly. 5.Everyone must be acquainted with the escape route and door. This is at the far end of the OHMC lab. This route should be kept clear. | |
| **Other:** (e.g. computer use, working at height, confined spaces, lone working, manual handling, slips, trips and falls, dust etc)  Computer Use, lone working, slips trips and falls | |
| Identified risks should be discussed with your supervisor and a safe system of work agreed. A more in depth risk assessment may be required after initial review. Do not proceed until this form is signed off.  For any safety queries contact the Department of Engineering, Safety Office on 01223 (3)32740 or 01223  (7)61455 or email [safety-office@eng.cam.ac.uk,](mailto:safety-office@eng.cam.ac.uk) Room INO-18 (*Inglis Building Office Floor*). | |
| |  |  |  |  | | --- | --- | --- | --- | | **Signature of Student:** |  | **Date:** | **15/10/2024** | | **Signature of Supervisor:** |  | **Date:** | **16.10.2024** | | **Signature of Safety Office:** | | **Date:** |  | | |